

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1, 2, 4-8, 10-15, 17-20, and 22-38 will be pending. By this amendment, claims 1, 2, 4, 19, 29, and 33 have been amended; and claims 34-38 have been added. No new matter has been added.

§101 Rejection of Claim 33

In Section 2 (Page 2) of the Office Action dated December 17, 2007 (“the Office Action”), claim 33 stands rejected under 35 U.S.C. §101. Claim 33 has been amended to address the rejection.

§103 Rejection of Claims 1-2, 4-6, 10-11, 16, 19-20, 22, 24, 29-31 and 33

In Section 2 (Page 3) of the Office Action, claims 1-2, 4-6, 10-11, 16, 19-20, 22, 24, 29-31, and 33 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin (U.S. Patent Publication No. 2004/0204076) in view of Bahl *et al.* (U.S. Patent Publication No. 2004/0204071; hereinafter referred to as “Bahl”) and further view of Reddy *et al.* (US Pat Publication No. 2004/0127214).

In the Background section of the Specification, it is stated:

Some wireless devices provide multiple interfaces for communication. For example, a wireless device may include a PAN interface (personal area network) and a wireless LAN interface (local area network), such as Bluetooth and Wi-Fi (e.g., IEEE 802.11.b). When a user of such a multiple interface device wants to communicate with a user of another device, the user typically manually determines what common interface is available, such as by directly talking with the second user. After determining

the common interface, the users typically manually configure the devices to establish a connection for communication. To change or end the connection, the users again manually adjust the configuration of the devices. While the users have been able to establish communication, for some users the manual configuration and control may prove difficult.

Background of the Specification, Paragraph [0001].

Therefore, the Background highlights the need to automatically detect and determine a connection for communication. Further, the Background stresses the need for multiple interfaces having multiple speeds, ranges, and routes of connections.

To achieve the above-stated objectives, embodiments of the present invention provide for interface negotiation for selecting an appropriate communication interface having a specific speed, range, or route of connection. The interface used for negotiation is configured as short range and low power interface to provide reliable signal and reduced power consumption for negotiation. For example, the wireless device for interface negotiation, as recited in amended claim 1, includes:

a wireless interface configured to provide short range and low power interface for supporting communication across a wireless connection used for a negotiation service to select a communication interface,

wherein the short range and low power interface provides reliable signal and reduced power consumption for negotiation;

a first communication interface for providing a medium range wireless interface;

a second communication interface for providing a wired interface;
and

a controller connected to said wireless interface, said controller supporting the negotiation service and a communication service;

wherein said negotiation service provides interface negotiation for using said wireless interface to negotiate with another device to select an appropriate communication interface for communication of data with said another device,

wherein said negotiation service selects one of: (1) said first communication interface for direct communication between the wireless device and said another device, and (2) said second communication interface for indirect communication through a network,

wherein said first communication interface is a separate interface from said wireless interface used for interface negotiation, and

wherein said communication service provides control and management of communication with said another device across a connection established using said negotiation service, and

wherein a first connection opened using said negotiation service and said wireless interface is kept open while a second connection opened using said communication service and one of said first communication interface and said second communication interface is open.

(emphasis added)

Accordingly, claim 1 includes at least three interfaces: (1) *a wireless interface* configured to provide short range and low power interface for supporting communication across a wireless connection used for a negotiation service to select a communication interface, wherein the short range and low power interface provides reliable signal and reduced power consumption for negotiation; (2) *a first communication interface* for providing a medium range wireless interface; and (3) *a second communication interface* for providing a wired interface. Claim 1 further includes a controller connected to the wireless interface configured to support a negotiation service and a communication service, wherein the negotiation service selects one of: (1) the first communication interface for direct communication between the wireless device and another

device, and (2) the second communication interface for indirect communication through a network.

These limitations are described in the Specification, where “FIG. 1 shows a representation of a network environment 100 including a first wireless device 105 and a second wireless device 110. ... The second wireless device 110 includes a wired interface 125, a short-range wireless interface 130, and a medium-range wireless interface 135. In one implementation, the short-range wireless interfaces 115 and 130 are personal area network interfaces, such as Bluetooth, and the medium-range wireless interfaces 120 and 135 are local area network interfaces, such as Wi-Fi.” *Specification, Paragraph [0014]*.

By contrast, Kotzin states in Paragraphs [0013] and [0014] that “[t]he portable subscriber device 103 is arranged and constructed to augment and facilitate interfacing to and from the portable subscriber device via facilities of one or more external devices. The device 103 includes the antenna 205 that operates to radiate and absorb or receive radio frequency signals that are transmitted or sent from or received by a wide area network (WAN) transceiver 203 of the subscriber device as is known. The transceiver 203 interactively operates with a controller 207 or processor 208 portion thereof to provide to or accept or receive from the controller 207, messages or signals corresponding thereto so as to interact with the WAN in order to support services, such as phone calls or data messages, for a user of the device as is also known. The controller 207 or processor 208 is coupled to and operates together with a local area or LAN transceiver 209, a user interface 211 via I/O port 213, including a keyboard 215, a display 217, a speaker 219, and a microphone 221 to effect the user interface, and optionally, via the I/O port 213, a NIC 223 or modem 225 suitable for establishing a wired interface to the portable device. ... The LAN transceiver 209 is a known local area transceiver that is used to locate external

devices and to establish links with appropriate such external devices.” Thus, Kotzin merely discloses a portable device including a WAN transceiver and a LAN transceiver.

Kotzin fails to disclose: (1) configuring *a wireless interface* to provide short range and low power interface for supporting communication across a wireless connection used for a negotiation service to select a communication interface, wherein the short range and low power interface provides reliable signal and reduced power consumption for negotiation. Further, Kotzin fails to disclose configuring two communication interfaces to be selected by the low-power short-range wireless negotiation interfaces, wherein the first communication interface provides for a medium range wireless interface and the second communication interface provides for a wired interface.

That is, claim 1 is clearly distinguishable from Kotzin in that, in claim 1 one wireless interface (“a wireless interface”) is configured as a short-range and low-power interface and is used as a negotiation interface between two devices to select a communication interface (from two communication interfaces) that is appropriate for the two devices. The negotiation interface is configured as a short-range and low-power interface to provide reliable signal and reduce power consumption.

Bahl states in Paragraph [0012] that “the present invention includes protocol preference negotiation between the two wireless devices to select an acceptable wireless protocol for use between them.” Thus, Bahl discloses a single wireless interface but allowing negotiation for selecting a protocol from multiple wireless protocols. The Merriam-Webster dictionary defines “protocol” as “a set of conventions governing the treatment and especially the formatting of data in an electronic communications system”. Therefore, Bahl provides software compatibility

among multiple protocols to communicate with each other by formatting of data across the same connection.

However, the Merriam-Webster dictionary defines “interface” as “the place at which independent and often unrelated systems meet and act on or communicate with each other”. Thus, the term “interface” refers to hardware. Accordingly, it is submitted that multiple “interfaces” disclosed in claim 1 refer to multiple hardware connections with multiple speeds, ranges, and routes which can be selected by the negotiation service to provide flexible communication.

Therefore, it is submitted that Bahl also fails to teach, suggest, or disclose having at least three interfaces: a wireless interface supporting communication across a wireless connection; a first communication interface for providing short range wireless interfaces; a second communication interface for providing one of medium range wireless interface and wired interface, wherein the negotiation service selects one of: (1) the first communication interface for direct communication between the wireless device and another device, and (2) the second communication interface for indirect communication through a network.

Reddy is merely cited for teaching a negotiation service selecting one communication interface. Assuming arguendo that Reddy does teach this limitation, it is submitted that Kotzin, Bahl, and Reddy, individually or in combination, fail to teach all limitations of claim 1.

Based on the foregoing discussion, claim 1 should be allowable over Kotzin, Bahl, and Reddy. Other independent claims 19, 29, and 33, as amended, include similar limitations as claim 1. Therefore, claims 19, 29, and 33 should also be allowable over Kotzin, Bahl, and Reddy. Since claims 2, 4-6, 10-11, 20, 22, 24, and 30-31 depend from one of claims 1, 19, and 29, claims 2, 4-6, 10-11, 20, 22, 24, and 30-31 should also be allowable over Kotzin, Bahl, and

Reddy. Claim 16 has been canceled.

Accordingly, it is submitted that the rejection of claims 1-2, 4-6, 10-11, 16, 19-20, 22, 24, 29-31, and 33 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

Newly-added Claims 34-38

Newly-added claims 34-38 include further limitations to define how the wireless device interfaces with a beacon source. For example, claim 38 provides that the beacon signal is supplied upon request such that when the wireless device enters the range of the beacon source, the device informs the beacon source of the device's presence and the beacon source sends the beacon signal to the wireless device.

None of the cited references (Kotzin, Bahl, and Reddy), individually or in combination, teach or suggest the new limitations added in claims 34-38. Accordingly, newly-added claims 34-38 should be allowable.

§103 Rejection of Claim 7

In Section 3 of the Office Action, claim 7 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin in view of Bahl and further in view of Reddy as applied to claims 1 and 3 above, and further in view of Janik. (U.S. Patent Publication No. 2004/0253945).

Based on the foregoing discussion regarding independent claim 1, and since claim 7 depends from claim 1, claim 7 should be allowable over Kotzin, Bahl, and Reddy. Further, Janik is merely cited for teaching that “a LAN provides a higher data rate than a WAN.” *Section 3, page 12 of the Office Action*. Therefore, claim 7 should be allowable over Kotzin, Bahl, Reddy,

and Janik.

Accordingly, it is submitted that the rejection of claim 7 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 8

In Section 4 of the Office Action, claim 8 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin in view of Bahl, and further in view of Reddy as applied to claims 1 and 3 above, and further in view of Moon *et al.* (U.S. Patent Publication No. 2005/0076054; hereinafter referred to as “Moon”).

Based on the foregoing discussion regarding independent claim 1, and since claim 8 depends from claim 1, claim 8 should be allowable over Kotzin, Bahl, and Reddy. Further, Moon is merely cited for teaching that “a second communication interface uses more power than a wireless interface”. *Section 4, page 13 of the Office Action.* Therefore, claim 8 should be allowable over Kotzin, Bahl, Reddy, and Moon.

Accordingly, it is submitted that the rejection of claim 8 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claims 12, 14-15, 17-18, 25, 27-28 and 32

In Section 5 of the Office Action, claims 12, 14-15, 17-18, 25, 27-28 and 32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin in view of Bahl, and further in view of Reddy and further in view of Shah *et al.* (U.S. Patent Publication No. 2004/0023652; hereinafter referred to as “Shah”).

Based on the foregoing discussion regarding independent claims 1, 19, and 29, and since claims 12, 14-15, 17-18, 25, 27-28, and 32 depend from one of claims 1, 19, and 29, claims 12, 14-15, 17-18, 25, 27-28, and 32 should be allowable over Kotzin, Bahl, and Reddy. Further, Shah is merely cited for teaching that “the negotiation service selects a communication interface without user input”. *Section 5, page 14 of the Office Action*. Therefore, claims 12, 14-15, 17-18, 25, 27-28, and 32 should be allowable over Kotzin, Bahl, Reddy, and Shah.

Accordingly, it is submitted that the rejection of claims 12, 14-15, 17-18, 25, 27-28 and 32 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 23

In Section 6 of the Office Action, claim 23 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin in view of Bahl, and further in view of Reddy and further in view of Carlton *et al.* (U.S. Patent Publication No. 2005/0141450; hereinafter referred to as “Carlton”) and in further view of Moon.

Based on the foregoing discussion regarding independent claim 19, and since claim 23 depends from claim 19, claim 23 should be allowable over Kotzin, Bahl, Reddy, and Moon. Further, Carlton is merely cited for teaching “a communication criteria that includes data rate”. *Section 6, page 17 of the Office Action*. Therefore, claim 23 should be allowable over Kotzin, Bahl, Reddy, Moon, and Carlton.

Accordingly, it is submitted that the rejection of claim 23 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 26

In Section 7 of the Office Action, claim 26 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kotzin in view of Bahl, and further in view of Reddy as applied to claims 19, 22 and 24 above, and further in view of Ahonen *et al.* (U.S. Patent Publication No. 2005/0085188; hereinafter referred to as “Ahonen”).

Based on the foregoing discussion regarding independent claim 19, and since claim 26 depends from claim 19, claim 19 should be allowable over Kotzin, Bahl, Reddy. Further, Ahonen is merely cited for teaching that “the communication mode indicates a type of encryption to use for the communication connection”. *Section 7, page 18 of the Office Action.* Therefore, claim 26 should be allowable over Kotzin, Bahl, Reddy, and Ahonen.

Accordingly, it is submitted that the rejection of claim 26 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

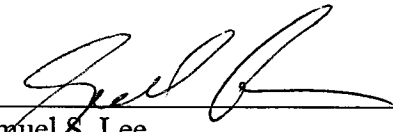
Conclusion

In view of the foregoing, Applicants respectfully request reconsideration of claims 1, 2, 4-8, 10-15, 17-20, and 22-38 in view of the remarks and submit that all pending claims are presently in condition for allowance.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicants' representative at the telephone number written below.

Respectfully submitted,
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